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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/053,969	01/22/2002	Stephen E. Terry	I-2-135.2US	4018

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VOLPE AND KOENIG, P.C.
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UNITED PLAZA, SUITE 1600
30 SOUTH 17TH STREET
PHILADELPHIA, PA 19103

EXAMINER

MILLS, DONALD L

ART UNIT	PAPER NUMBER
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2662

DATE MAILED: 03/15/2004

5

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/053,969

Applicant(s)

TERRY, STEPHEN E.

Examiner

Donald L. Mills

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 January 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 2.3
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 4, 5, 12, and 13 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claims contain subject matter, which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Regarding claims 4, 5, 12, and 13, the claims specify the step of *data flow limiting by changing the size of each data source queue in response to the tracked backlog (Claims 4 and 12.)* However, the specification states if the mechanism 74 recognizes congestion and that the data will not be transmitted in a certain period of time, access to the channel 56 limits the flow of data from the individual data sources; the individual sources will recognize the need to reroute data or to not attempt transmission (See page 6, lines 1-4.) It is unclear from the specification whether the data source queue is decreased or increased in response to the backlog, since no mention of controlling the size of the data source queue is disclosed.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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4. Claims 1-3, 6, 7, and 9-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Chuah (EP 0912015 A2).

Regarding claim 1, Chuah discloses a method, which comprises:

Providing a queue for incoming data of each data source (A downlink/uplink buffer is inherently provided in order to multiplex the signals. See page 30, line 48.)

Tracking a backlog of data in the queue (Referring to Figure 19, the total number of currently associated users of all classes is monitored. See page 30, line 21.)

Limiting data flow from each of the data sources based on in part the tracked backlog (Referring to Figure 19, if the total number of admitted remote hosts is less than the maximum total number of remote hosts **1920** the unadmitted higher priority host will be admitted **1925**. See page 30, lines 23-25.)

For each data source capable of rerouting packet data, selectively rerouting packet data intended to be transmitted over the multiuser channel to another channel based on in part the tracked backlog (During congestion, the overload control method may redirect users of a lower priority to other nearby APs that have a lower load based on the total number of currently associated users. See page 30, line 44-47.)

For each data source not capable of rerouting packet data, selectively not sending packet data intended to be transmitted over the multiuser channel based on in part the tracked backlog (Referring to Figure 19, if none of the already admitted remote hosts is of a lower priority class **1930**, the requesting higher priority host will be refused admission **1935** if the total number of admitted remote hosts is not less than the maximum total number of remote hosts. See page 30, lines 25-27.)

Regarding claims 2 and 10, Chuah discloses *queue as a single queue associated with the multiuser channel* (A downlink/uplink buffer is provided. See page 7, line 48.)

Regarding claim 3 and 11, Chuah discloses *a plurality of queues, the plurality of queues comprising a queue per each data source and a queue for the multiuser channel* (Referring to Figure 2, packets are buffered at the remotes and inherently at the base station when uplink and downlink communications are time-multiplexed on a single frequency channel. See page 7, lines 52-54.)

Regarding claims 6 and 7, Chuah discloses *the multiuser channel as a shared channel (Claim 6)/common channel (Claim 7)* (Uplink and downlink communications are time-multiplexed on a single frequency channel. See page 7, lines 53-54.)

Regarding claim 9, Chuah discloses a system, which comprises:

A plurality of communication nodes (Referring to Figure 2, the system comprises a home mobility switching center, foreign mobility switching center, base station, etc. See page 7, lines 5-6.)

A plurality of user equipments (Referring to Figure 2, each cell has a base station and a number of remote hosts. See page 7, lines 48-49,) *having: means for receiving packet data transferred over a multiuser channel* (Downlink communications are time multiplexed on a single frequency channel. See page 7, line 54.)

A radio network controller having: a queue for incoming data from each data source (A downlink/uplink buffer. See page 30, line 48;) *means for tracking a backlog of packet data in the queue* (The downlink/uplink buffer occupancy is monitored. See page 30, line 48;) *means for limiting data flow from each of the data sources based on in part the tracked backlog* (Referring to Figure 19, if the total number of admitted remote hosts

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is less than the maximum total number of remote hosts **1920** the unadmitted higher priority host will be admitted **1925**. See page 30, lines 23-25.)

For each data source capable of rerouting packet data, means for selectively rerouting packet data intended to be transmitted over the multiuser channel to another channel based on in part the tracked backlog (During congestion, the overload control method may redirect users of a lower priority to other nearby APs that have a lower load based on the total number of currently associated users. See page 30, line 44-47.)

For each data source not capable of rerouting packet data, means for selectively not sending packet data intended to be transmitted over the multiuser channel based on in part the tracked backlog (Referring to Figure 19, if none of the already admitted remote hosts is of a lower priority class **1930**, the requesting higher priority host will be refused admission **1935** if the total number of admitted remote hosts is not less than the maximum total number of remote hosts. See page 30, lines 25-27.)

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 4 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chuah (EP 0912015 A2) in view of Gaylord (US 6,105,070).

Regarding claims 4 and 12 as explained in the rejection statement of claims 1 and 9; Chuah discloses all the claim limitations as set forth in claims 1 and 9 (parent claims).

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Chuah does not disclose *changing the size of each data source queue in response to the tracked backlog*.

Gaylord teaches reducing the size of buffers if they are usually empty (See column 4, lines 31-33.) In addition Gaylord teaches that by adjusting the buffering characteristic, latency is reduced and the system can be adjusted for real time constraints posed by voice-data transmissions.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the buffering adjustment method of Gaylord in the method for overload control of Chuah. One of ordinary skill in the art at the time the invention was made would have been motivated to do so in order to reduce the latency of traffic.

7. Claims 5 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chuah (EP 0912015 A2) in view of Gaylord (US 6,105,070) further in view of Watanabe et al. (US 6,285,662 B1), hereinafter referred to as Watanabe.

Regarding claims 5 and 13 as explained in the rejection statement of claims 1 and 9; Chuah discloses all the claim limitations as set forth in claims 1 and 9 (parent claims). Chuah does not disclose *wherein the size of each data source queue decreases as the tracked backlog increases and increases as the tracked backlog decreases*.

Watanabe teaches an access point 14, which broadcasts an indication of the number of time slots allocated to form random access channels within a particular frame, and is read by the contention window selector 46 to select the size of the contention

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window, inherently an indirect relationship between the size of the contention window and impending traffic (See column 8, lines 8-13 and 17-25.)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the method of Watanabe in the system of Chuah and Gaylord. One of ordinary skill in the art would have been motivated to do so in order to reduce the possibility of the occurrence of a collision condition as taught by Watanabe (See column 3, lines 38-40.)

8. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chuah (EP 0912015 A2) in view of Watanabe et al. (US 6,285,662 B1), hereinafter referred to as Watanabe.

Regarding claim 8 as explained above in the rejection statement of claim 1, Chuah discloses all of the claim limitations of claim 1 (parent claim). Chuah does not disclose *wherein the common channel is a forward access control channel.*

Watanabe teaches an access point 14, which receives data from the random access channel, which is accessible from any of mobile terminals 12 (See column 6, lines 58-62 and column 7, lines 1-4.)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the method of Watanabe using a FACH in the system of Chuah. One of ordinary skill in the art would have been motivated to do so in order to reduce the possibility of the occurrence of a collision condition as taught by Watanabe (See column 3, lines 38-40,) in the downlink direction.

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Conclusion

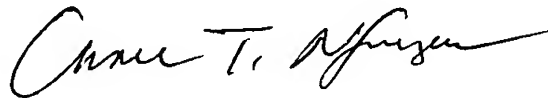
9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Donald L Mills whose telephone number is 703-305-7869. The examiner can normally be reached on 8:00 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on 703-305-4744. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Donald L Mills

March 1, 2004



CHAU NGUYEN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600